National Weather Service
Storm Data and Unusual Weather Phenomena

October 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
LAKE MICHIGAN									
LMZ645	**North Pt Lt To Wind Pt Wi**								
4 SE Milwaukee Harbor Milwaukee Harbor	**04**	**0954CST**			**0**	**0**			**Marine Tstm Wind (G38)**
LMZ646	**Wind Pt Lt Wi To Winthrop Hbr Il**								
2 S Wind Point	**04**	**0957CST**			**0**	**0**			**Marine Tstm Wind (G36)**
LMZ644	**Pt Washington To North Pt Lt Wi**								
1.8 N North Point Lthous North Point Lthouse	**04**	**1000CST**			**0**	**0**			**Marine Tstm Wind (G37)**
LMZ643	**Sheboygan To Pt Washington Wi**								
Sheboygan	**04**	**1000CST**			**0**	**0**			**Marine Tstm Wind (G46)**

A line of intense showers moved east through southeast Wisconsin and out over Lake Michigan, producing strong wind gusts from the southwest to west. This line of showers moved through an atmosphere that already had winds of 35 to 61 kts (40 to 70 mph) between 2 and 10 thousand feet above the ground. Mixing of air inside and near the downdraft/rain showers allowed for the transfer of these stronger winds down to the surface.

WISCONSIN, Southeast									
Walworth County									
Darien to Fontana	**04**	**0855CST**			**0**	**0**	**25K**		**Thunderstorm Wind (G58)**
Waukesha County									
2.2 SE Eagle	**04**	**0900CST**			**0**	**0**	**50K**		**Thunderstorm Wind (G61)**
Waukesha County									
Oconomowoc to 1 S Hartland	**04**	**0903CST 0920CST**			**0**	**0**	**300K**		**Thunderstorm Wind (G64) M**
Racine County									
Burlington to Racine	**04**	**0925CST 0940CST**			**0**	**0**			**Thunderstorm Wind (G54)**
Washington County									
Germantown	**04**	**0925CST**			**0**	**0**			**Thunderstorm Wind (G54) M**
Sheboygan County									
Sheboygan	**04**	**0940CST**			**0**	**0**	**2K**		**Thunderstorm Wind (G58) M**

During the mid-morning hours of October 4, 2002, a line of convective showers, orientated north to south moved east through south-central and southeast Wisconsin, and produced strong, gusty west winds generally in the 35 to 48 kt (40 to 55 mph) range with scattered reports of 52 to 61 kts (60 to 70 mph), an isolated "gustnado", and heavy rains. There were several reports of uprooted trees, etc. Interestingly, no thunder or lightning was reported by spotters or the general public, nor did any cloud-to-ground lightning strikes register on the national lightning detection network. However, off-duty National Weather Service (NWS) employees in Oconomowoc (Waukesha Co.) observed some cloud-to-cloud lightning. The line of convective showers was moving through an atmosphere that already had winds of 35 to 61 kts (40 to 70 mph) between 2 and 10 thousand feet above the ground. Mixing of air inside and near the downdraft/rain showers allowed for the transfer of these stronger winds down to the surface

As the line of showers moved through the remainder of southeast Wisconsin, it briefly intensified in scattered locations such that winds gusts over 48 kts (55 mph) were noted. A wind gust of 56 kts (65 mph) occurred at an Oconomowoc about 0900CST, a wind gust of 54 kts (62 mph) was measured in Germantown (Washington Co.) by a storm spotter about 0925CST, a 74 mph gust from the west-southwest was measured at the home of an Amateur Radio operator about 1 mile south of Hartland (Waukesha Co.) at about 0920CST, and a 58 kt (67 mph) gust was reported from a Sheboygan (Sheboygan Co.) school/TV network site. The 74 mph wind gust was associated with a "gustnado" that tore the roof off a home just two doors away on Manchester Lane. Across the street an apartment building sustained roof damage, and two support columns for the front door overhang were toppled. A sliding glass door on the 2nd floor of the apartment building was sucked out of the wall. In addition, a large 60-foot tree on an adjacent street was pushed over onto the roof a home, resulting in damage. Several other large trees were uprooted, and roof shingles were lifted off on a couple homes. Another apartment building sustained damage to a wooden deck. Just west of Hartland, the high winds knocked over a flat-bed farm trailer. On the west side of Eagle Springs Lake (Waukesha Co.) the powerful winds uprooted large trees, which damaged the roof of one residence, damaged a boat house, and two boats on trailers. In addition, the winds destroyed another boat house.

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WISCONSIN, Southeast

Elsewhere in southeast Wisconsin, the Oconomowoc area had uprooted trees and toppled power lines, with one home sustaining damage due to a toppled tree. In Racine County the powerful winds uprooted trees and knocked tree branches loose which hit some power lines. Small tree branches were also knocked loose in all of the other southeastern Wisconsin counties. At least 8000 customers in southeast Wisconsin lost electrical power. Total rainfall associated with the showers ranged from 0.50 to 1.00 inches. Monetary damage amounts listed above are rough estimates.

WIZ052-060 **Sheboygan - Ozaukee**

11 0200CST 0830CST 11 0 Fog

Shallow dense fog developed over parts of Sheboygan and Ozaukee counties during the overnight hours, and persisted to about 0830CST. The dense fog, reducing visibilities to zero to 1/4 mile, was a factor in three closely-spaced, but separate multi-vehicle accidents in Sheboygan County (total of 50 vehicles), and one two-vehicle accident in northern Ozaukee County. In Sheboygan County, the three multi-vehicle accidents occurred around 0615 to 0620CST, on a stretch of Interstate-43 southeast of Cedar Grove. The southern-most of the three, involving 34 vehicles, resulted in 10 fatalities and 40 injuries. The interstate southeast of Cedar Grove is situated very close to Lake Michigan, where weak onshore flow of only 1-3 mph concentrated evaporated moisture off the relatively warm Lake Michigan waters. In that vicinity, the fog was especially dense, and newspaper articles reported that some drivers described the exceptionally dense fog as a whiteout, unavoidable, and unanticipated. Some drivers involved in the accident said they could look up and see blue sky, but couldn't see 5 feet in front of them. Additionally, law enforcement officials indicated that some of the drivers involved in the killer pile-up were probably driving too fast for the weather conditions. It is possible that sunlight at a low angle penetrating the shallow dense fog made visibilities worse due to scattering of light. Another two-vehicle accident occurred on the northwest corner of Belgium in northern Ozaukee county, resulting in 1 death and 1 injury. M52VE, M26VE, M38VE, M45VE, M36VE, M42VE, M25VE, M63VE, F24VE, F49VE, F14VE